5280 THE DENVER MAGAZINE

BY: JUSTINE HAUSHEER
ISSUE: JULY 2013
SECTION: FRONT RANGE
TAGS: DRONES

It's A Bird, It's A Plane...

Why drones aren't just for warfare anymore.

Drones might not be the first things you'd expect to see in Colorado airspace—after all, we're not exactly a war zone. But while news coverage this year has focused on the U.S. military's controversial use of the unmanned aircraft in the Middle East, Colorado scientists and law enforcement are turning to the high-flying technology for different reasons.

Raven RQ-11A
Project: Sandhill cranes descend on Monte Vista National Wildlife Refuge each spring and fall, and biologists gather population data to monitor species health. They previously counted the birds from low-flying planes, which occasionally crash. So the refuge recruited Leanne Hanson, a U.S. Geological Survey (USGS) biologist, to see if unmanned machines would offer a safer method. They did—and Hanson has been repurposing retired military drones since 2011.
On the side: The USGS has access to 34 drones that it employs to survey pygmy rabbit habitats in Idaho, monitor prescribed burns, and track sediment flow in Washington's Elwha River.
fort.usgs.gov/RavenA

Data Hawk
Project: To better understand climate change, you need to head north—so say University of Colorado Boulder researchers. The scientists have designed and built drones for deployment this summer to Oliktok Point, Alaska, to study the Arctic's marginal ice zone, where ice and water

meet. The aircraft will measure air temperature, humidity, and pressure at different heights above the area and collect water temperature data wirelessly from floating sensors.
On campus: CU's Research and Engineering Center for Unmanned Vehicles has eight dedicated
faculty members. A previous project used drones to study the formation of tornadoes.
ccar.colorado.edu/mizopex

Falcon UAV
Project: The Mesa County Sheriff's Office receives 50 to 70 calls
each year requiring search-and-rescue. Time is critical in recovery operations, so the branch acquired a drone in 2012. "We can get a whole lot more done with the Falcon than with boots on the ground," says Benjamin Miller, manager of the county's Unmanned Aircraft Program. And it saves them money.
Running these missions using manned planes totals an average of $650 per hour; the Falcon operates at an hourly cost of $25.
In the area: The county uses a helicopterlike drone, the Draganflyer X6, to take aerial photos of outdoor crime scenes and car accidents. The images help investigators craft realistic 3-D models to help piece together what happened.
sheriff.mesacounty.us